

REMARKS

Reconsideration of this application is respectfully requested. Claims 1-18 as amended are presented for consideration.

Specification

Applicants have reviewed the specification as recommended by the Examiner, and have noted that certain of the mathematical formulas depicted therein had not been properly printed in that certain of the symbols appeared only as dots. Accordingly, the Specification has been amended to correct the printer malfunction that resulted in the misprinted mathematical formulas. Particularly, such formulas were found and corrected in paragraphs 16, 57, 59-61, 90 and 98.

Also, applicants found that the formulas depicted in paragraphs 67 and 68 had certain errors, and these have been correspondingly corrected as well.

With regard to the support for the corrections to the paragraphs in question, the correct formulas can be found in the parent PCT international publication. For example, at page 5, line 26 and line 30, at page 15, lines 32 and 33, on page 16, line 25, page 17, at lines 1 and 14, at page 18, line 35, at page 19, line 10, at page 24, lines 29-31 and at page 27, line 30. Thus, the proposed corrections are believed to be fully supported by the parent PCT application as filed which has been incorporated herein by reference at the filing hereof, and therefore, such insertions are not believed to raise new matter. Accordingly, entry and favorable consideration of the corrections to the specification are believed to be in order and are requested.

Drawings

The Examiner has objected to the drawings and particular, to figures 1, 2, 3 and 7 on the basis that labels for certain of the elements are not present. Applicants have prepared corrected drawings which are submitted herewith as four (4) sheets labeled "REPLACEMENT SHEET" and have also submitted a corresponding set of marked-up copies of the said drawings, reflecting the originally presented drawings having markings thereon to include the labels requested by the Examiner. Both sets of sheets are enclosed herewith and it is believed that the enclosed sheets represent full and complete compliance

with the Examiner's request. Accordingly, entry and favorable consideration of the drawing corrections and the replacement sheets is believed to be in order and is requested.

Claim Objections

Claims 1-18 have been objected to because of certain informalities and particularly, such formalities as are seen to be present by the Examiner in claim 1. Both of the items as noted by the Examiner with respect to claim 1 have been corrected by the amendments hereto and favorable consideration is accordingly requested.

The applicants have also noted certain other areas where corrections appeared warranted, and particularly in claim 4 where one of the formulae appears to be in error, on the same basis as noted with respect to the specification. Applicants have corrected the said formula and believe that it is now in compliance with the original text.

Also, similar correction was found necessary with respect to claim 13. In this instance, the symbols appearing in the formula were not depicted, and corrections to the formula have been made herein. Also, applicants noted that number depictions appearing in claim 13 identifying, respectively, voltage, resampler and filters, required cancellation, in similar fashion to the Examiner's request for claim 1. Such cancellations have been made herewith and are believed to be acceptable and in keeping with the Examiner's request as to claim 1. Favorable consideration and entry of the claims amendments to claim 13 are believed to be in order and are requested.

Lastly, claim 18 has been reviewed and in similar manner to claim 1, it was found that the numbers identifying the frequency corrector element required cancellation. Such numbers have likewise been cancelled, and favorable consideration of this amendment is likewise requested.

Claim Rejections 35 USC Section 103

Claims 1, 7-10 and 12 have been rejected under 35 USC Section 103(a) as unpatentable over Schmidl et al. in view of Jones et al. This rejection is traversed.

Initially, Schmidl et al. is acknowledged to apply to the broadcast of digital TV utilizing OFDM. A distinction between Schmidl et al. and the process of the present invention particularly as set forth in claim 1, is that Schmidl et al. relate to the

synchronization of carrier frequency offset, and not the correction of the sampling frequency offset, as is the aspect set forth in the claims of the present application. The Examiner refers to Schmidl at column 19, lines 51-61 for support of the assertion that the disclosure of how to selectively estimate and correct the sampling frequency is present in the reference. However, upon reviewing the cited portion of the reference, it is noted that cited passage refers to the correction of carrier frequency instead. Moreover, the manner in which Schmidl et al. estimate carrier frequency offset is not valid to apply and therefore cannot be used to estimate the sampling frequency offset, as if such an estimation were applied the obtained result would be zero. The Examiner is invited to calculate the average of the points in figure 15, where the results will be clearly evident.

A further distinction between Schmidl et al. and the disclosure of the present invention relates to the composition of the synchronization sequence as in two symbols. The primary purpose of utilizing two symbols would be to minimize the final variance, because the effects of impulsive noise, common in power networks, can be balanced on average. Most importantly, the utilization of this technology bears primary value in the case of data transmission, whereas in the instance of power transmission its presence and, as evidenced in Schmidl et al., its manner of achievement, are distinct. Simply stated, the disclosure of Schmidl et al. does not provide the teaching to the artisan that would lead to the use of the process defined in the claims of the present application. Thus, the disclosure of Schmidl et al. is inapt in rejection as proposed by the Examiner, and withdrawal of such rejection is requested.

Jones et al. fails to cure the deficiencies of Schmidl et al. as this reference is only relevant to the presentation of the state of the art with respect to the present area of interest to the presently claimed invention. In that respect, Jones et al. is not truly combinable with Schmidl et al. as the two references are directed to distinct areas of transmission and purpose. Apart from the lack of suggestion to combine the references, Jones et al. adds and discloses only those functionalities that are already known in the art, but shows no more: thus, the use of interpolators, decimators, converters, means for adding or extracting a cyclic prefix, are, individually, known in the art, but the manner in which they are utilized in the practice of the present invention is not, and this is absent from Jones et al. Moreover, Jones et al. fails to disclose the use of the digital IQ modulator (in phase and quadrature)

that is a feature of the present invention in the achievement of synchronization in accordance with the method herein claimed.

Thus, the combination of Jones et al. and Schmidl et al. fails by virtue of the lack of suggestion and connection between the respective references, and more generally, as the references in any combination fail to suggest the specific method of the presently claimed invention. Thus, reconsideration and withdrawal of the outstanding rejection as it may pertain to claims 1, 7-10 and 12 is believed to be in order and is therefore requested.

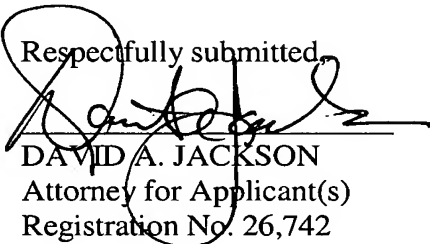
Claims 2-6, 11 and 13-18 have been objected to and the Examiner's comments regarding their allowability has been noted and appreciated. Applicants submit that upon reconsideration and withdrawal of the outstanding grounds of rejection, all claims can be indicated to be allowable and therefore entitled to issuance.

The Examiner has also cited U.S. Patent No. 6,985,432 and 6,628,735 as of interest. Applicants agree with the Examiner that the references in question are inapplicable in rejection of the claims herein.

Conclusion

In view of the above and foregoing, entry of applicants' amendments and reconsideration and withdrawal of the outstanding grounds of rejection and favorable consideration and allowance of the claims as presented, are believed to be in order and are courteously solicited.

Respectfully submitted,


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ENCLOSURES: Replacement Drawings – 4 Sheets
Marked-up Drawings - 4 Sheets
Request for Two (2) Month Extension of Time



ANNOTATED SHEET

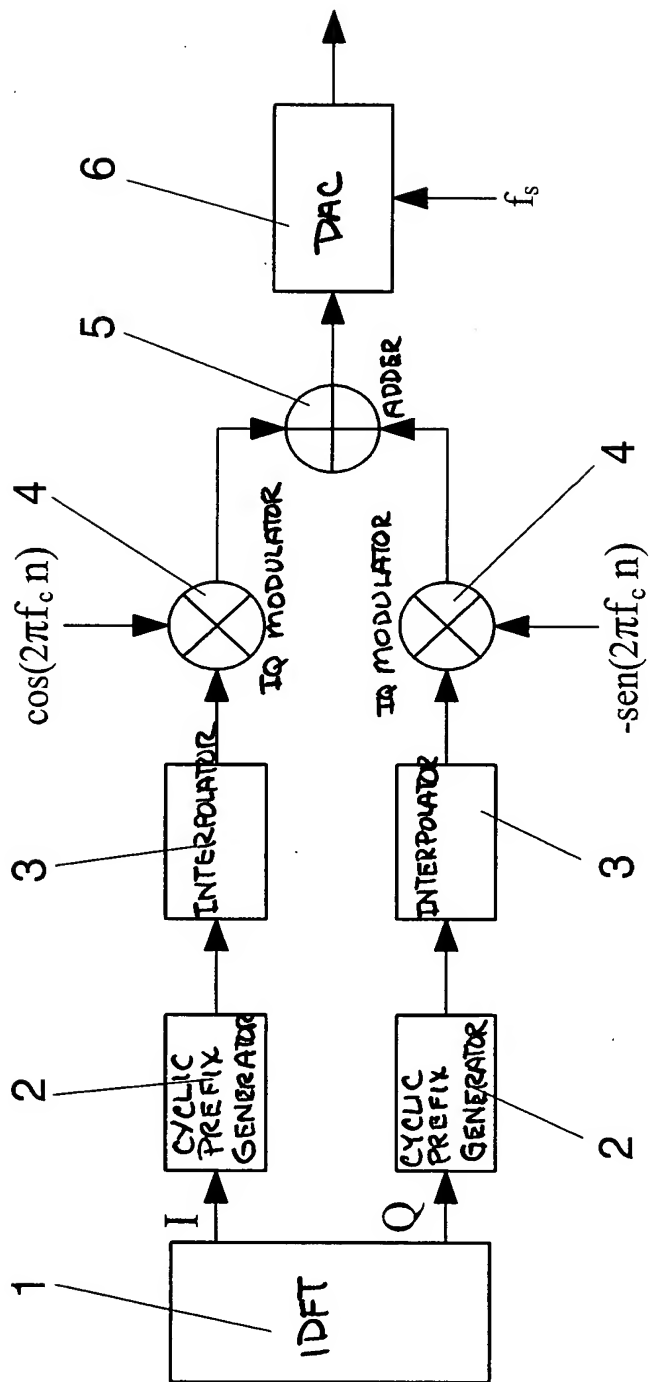


FIG. 1

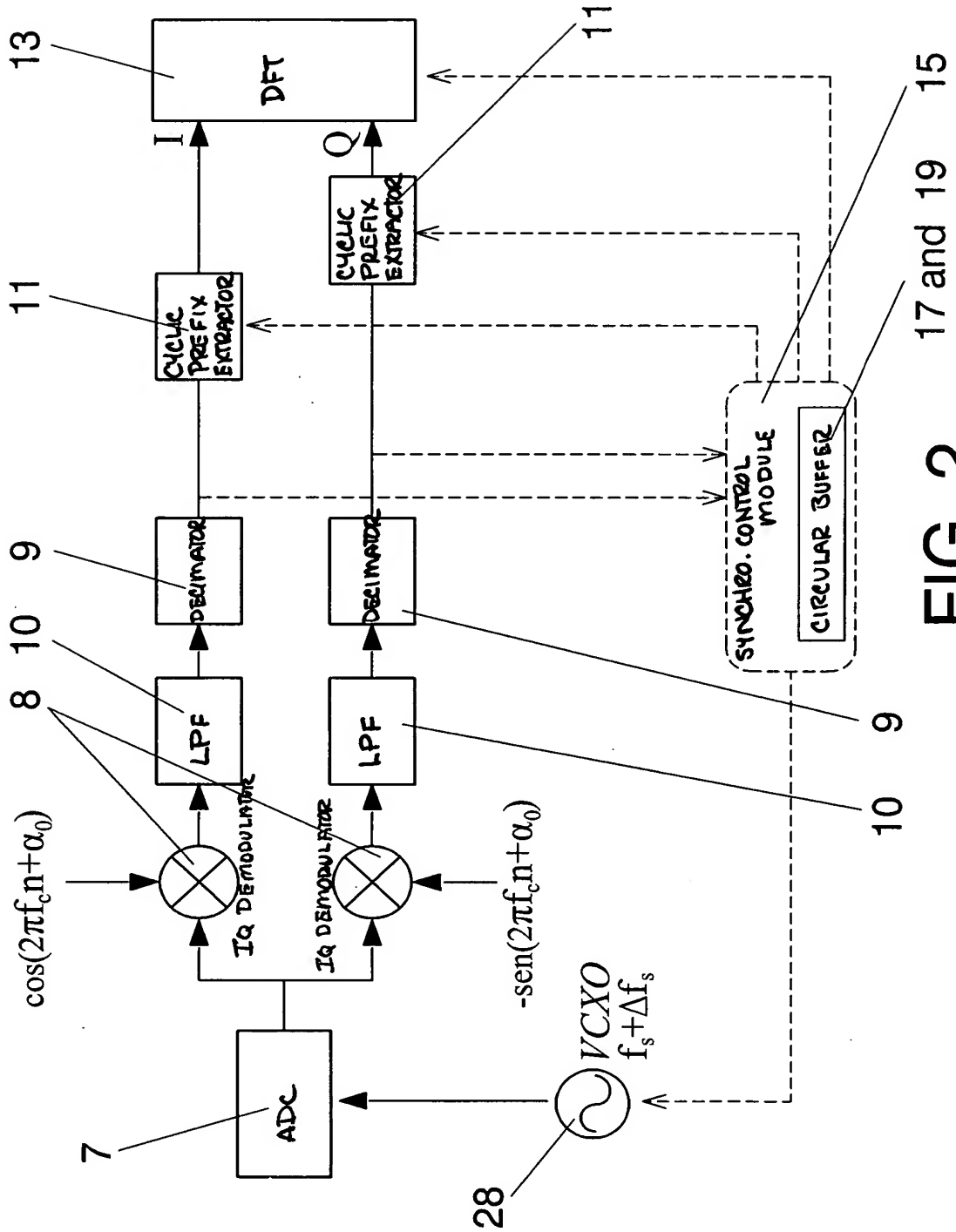


FIG. 2

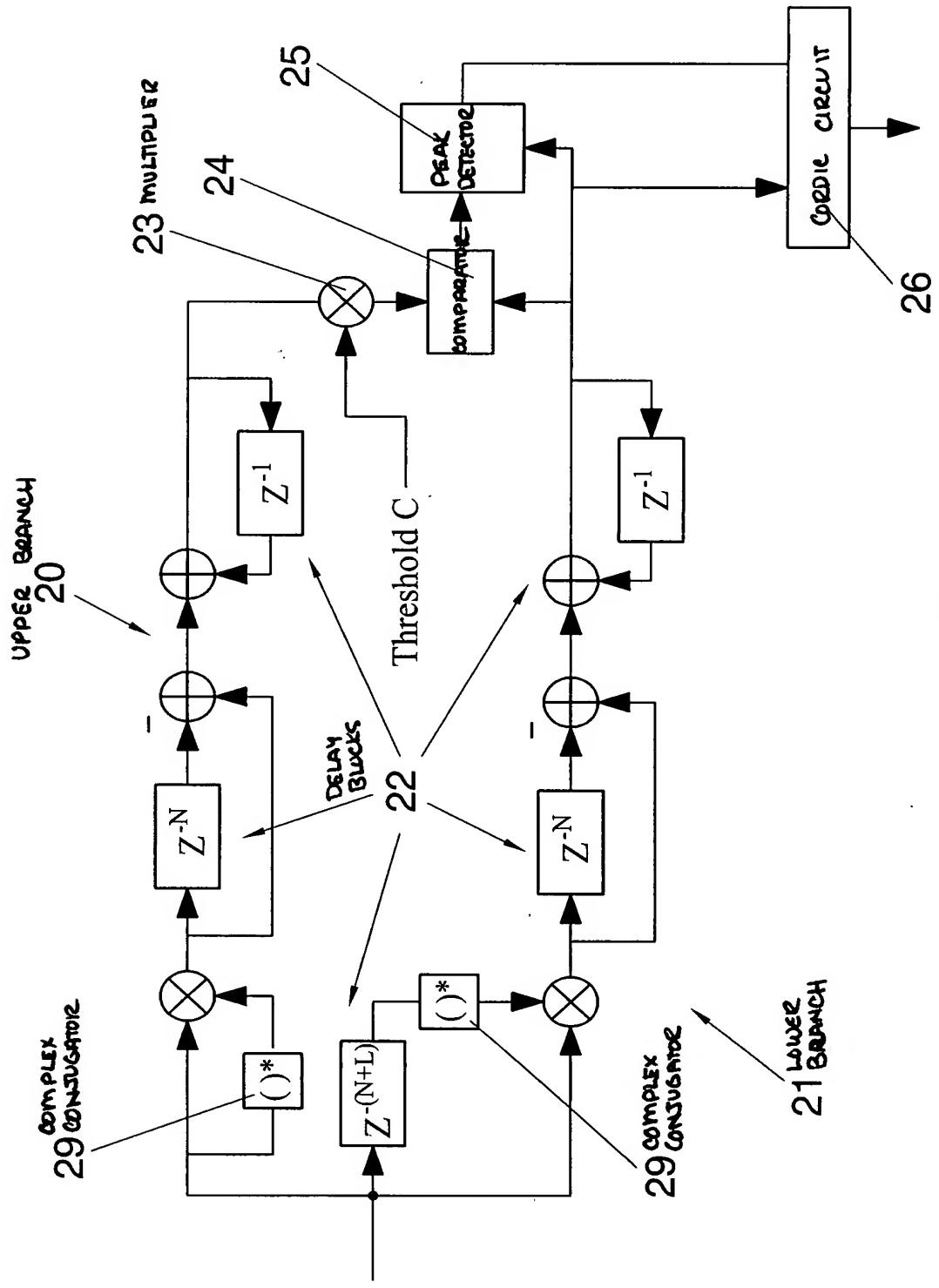


FIG. 7

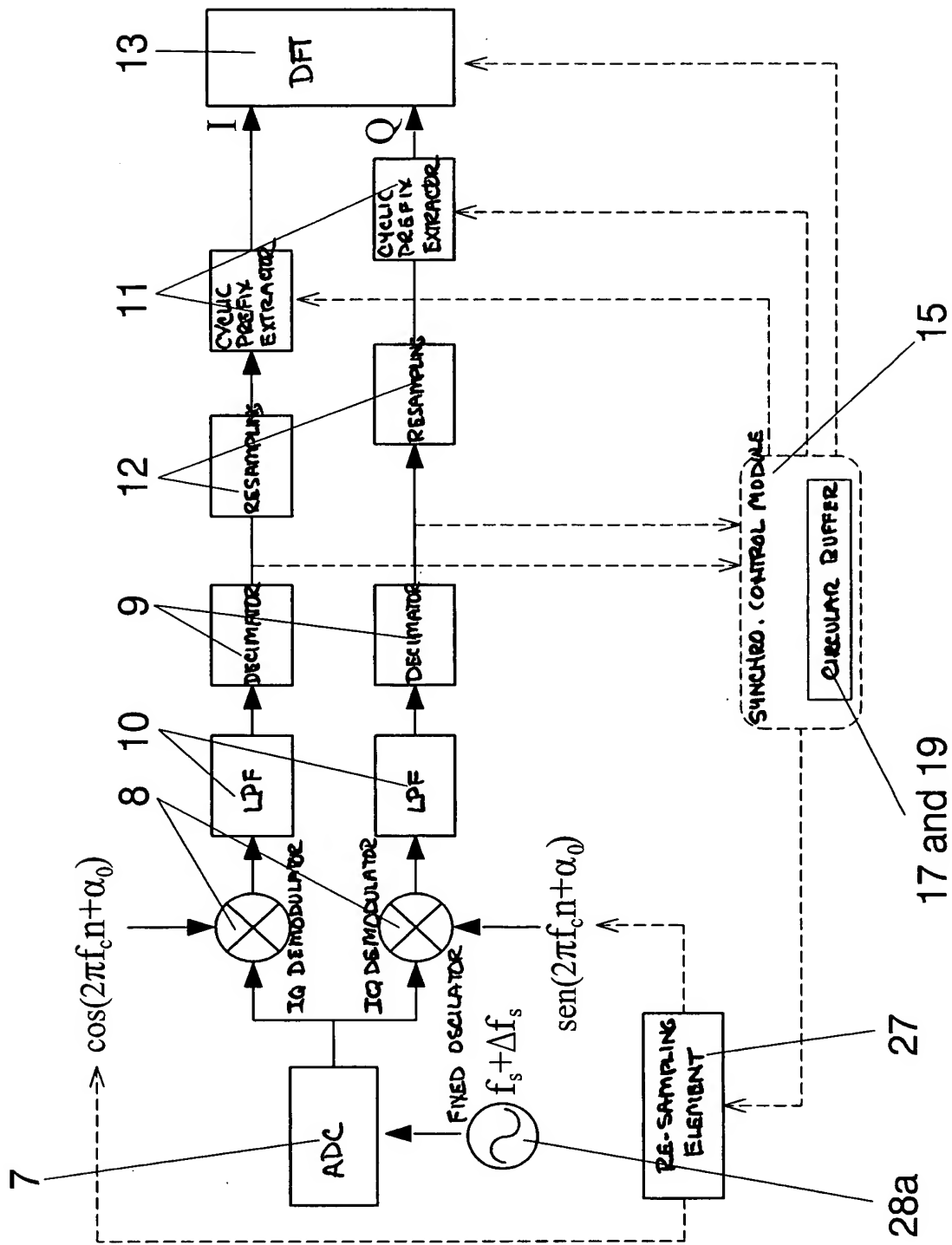


FIG. 3